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10/553,564	10/18/2005	Alastair Magnaldo	034299-669	2050
7590 Thelen Reid & Priest P O Box 640640 San Jose, CA 95161-6400				
09/29/2009				
EXAMINER				
KWAK, DEAN P				
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09/29/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/553,564

**Applicant(s)**

MAGNALDO ET AL.

**Examiner**

Dean Kwak

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/02/2009 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-9, 12, 13 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Lear et al. (US 5,252,486) and further in view of Pollema et al. (US 5,849,592).

Regarding Claim 1, O'Lear et al. disclose a method for analyzing a liquid sample (Abstract) by injecting the latter in a reaction loop (e.g. coil of tubing, Fig. 1 (41), C12/L57-58) coupled with illumination means and detection means, said method comprising the following steps:

- filling a reaction loop (e.g. coil of tubing, Fig. 1 (41), C12/L57-58) with a minimum volume of the sample to be analyzed (C5/L34-36), through a first input of a T-shaped branch (e.g. T-connector, Fig. 1 (35)) and its output, this reaction loop sample forming a transparent pipe (e.g., flow-through cell, C12/L68 & C13/L2) with a length between about 0.5 cm and about 10 cm (0.5 to 2 cm, C11/L47), with which detection means (e.g. colorimeter, Fig. 1 (49), C12/L68) are coupled,
- injecting at least one fixed volume of at least one reagent (e.g. color-forming reagent, C12/L39) into the reaction loop via a second input of the T-shaped

- branch, in using a *regulator* at a flow rate of about 10 to about 1,000  $\mu\text{L min}^{-1}$  (e.g. 0.15 ml/min or 150  $\mu\text{L/min}$ , C5/L34),
- illuminating the transparent pipe, (see a colorimeter being used, C11/L39-49),
  - detecting filtered light (e.g. 600-850 nm filter, C4/L39) by the detection means,
  - recording levels of light transmitted through said transparent pipe after filtering (C13/L1-5),
  - discharging the reagents located in the reaction loop (e.g. waste, C12/L30).

Although O'Lear et al. disclose a regulator (Fig. 1 (13) & C12/L39) to control flow rate, the reference fails to disclose a use of a push-syringe.

Pollema et al. disclose a method for analyzing a liquid sample (Abstract), filling a reaction loop using a push-syringe (Figs. 3A-3C (SP), C2/L52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a regulator with a push-syringe to control flow rate in low  $\mu\text{L}$  quantities, as disclosed by Pollema et al., see C5/L43-58.

Regarding limitations recited in Claim 1 which are directed to specific functions of a detector recited in said claim, it is noted that a detector can not function without having an illumination means to fully function. Even though O'Lear et al. do not explicitly disclose an illumination means, it would have been obvious to employ an illumination means to make the detector fully functional. As evidence by applicant's IDS filed on 03/14/2006, Hach (GB

967,586) discloses a lamp (Fig. 1 (60)) as an illumination means to be used with a colourimeter as detection means (Fig. 1 (15)).

Regarding Claims 2-8, O'Lear et al. further disclose the method, wherein:

- a concentration gradient is detected in the reaction loop (see determination of concentration at designated intervals, C4/L9-22);
- the reaction loop is a transparent capillary or a microfluidic channel (e.g. internal diameter of 0.0125 cm, C5/L28);
- the discharge of the reagents located in the reaction loop is performed by means of the remaining sample (C5/L5-7);
- the discharge of the reagents located in the reaction loop is performed by means of the next sample (C12/L28-31);
- the sample flux is not interrupted, which allows continuous analysis (e.g. continuous supply of fresh sample, C12/L31);
- fixed volumes of reagents are successively injected during predefined time intervals (C4/L19-22); and
  - a series of pulses of reagents is produced at flow rates of the order to 10 to 1,000  $\mu\text{L}/\text{min}$  (e.g. 0.15 ml/min or 150  $\mu\text{L}/\text{min}$ , C5/L34) followed by a waiting time;

Regarding Claim 9, O'Lear et al. further discloses the method, wherein:

- linear detection (e.g. colorimeter, Fig. 1 (49), C12/L68) is performed along the reaction loop.

Regarding Claim 9, with obtained information from the system, it is possible that the recited claim limitations can be achieved.

Regarding Claim 12, O'Lear et al. disclose a system for analyzing a liquid sample (Abstract) comprising

- a reaction loop (e.g. coil of tubing, Fig. 1 (41), C12/L57-58) between the sample introduced through an inlet linked to a first input of a T-shaped branch (e.g. T-connector, Fig. 1 (35)) and at least one reagent (e.g. color-forming reagent, C12/L39), and
- detection means (e.g. colorimeter, Fig. 1 (49), C12/L68), wherein the reaction loop consists of a transparent pipe (e.g., flow-through cell, C12/L68 & C13/L2), and the outlet of which is connected to the transparent pipe with a length between about 0.5 cm and about 10 cm (0.5 to 2 cm, C11/L47) allowing doses of said at least one reagent to be delivered into this loop, and
- illumination means with which this transparent pipe may be illuminated (see a colorimeter being used, C11/L39-49) so that the detection means record levels of light transmitted through said loop after filtering (e.g. 600-850 nm filter, C4/L39).

Although O'Lear et al. disclose a regulator (Fig. 1 (13) & C12/L39) to control flow rate, the reference fails to disclose a use of a push-syringe.

Pollema et al. disclose a method for analyzing a liquid sample (Abstract), filling a reaction loop using a push-syringe (Figs. 3A-3C (SP), C2/L52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a regulator with a push-syringe to control flow rate in low  $\mu\text{L}$  quantities, as disclosed by Pollema et al., see C5/L43-58.

Regarding limitations recited in Claim 12 which are directed to specific functions of a detector recited in said claim, it is noted that a detector can not function without having an illumination means to fully function. Even though O'Lear et al. do not explicitly disclose an illumination means, it would have been obvious to employ an illumination means to make the detector fully functional. As evidence by applicant's IDS filed on 03/14/2006, Hach (GB 967,586) discloses a lamp (Fig. 1 (60)) as an illumination means to be used with a colourimeter as detection means (Fig. 1 (15)).

Regarding Claims 13 & 17, O'Lear et al further disclose the system, wherein:

- the transparent pipe is a transparent capillary or a microfluidic channel (e.g. internal diameter of 0.0125 cm, C5/L28); and
- a microvalve (e.g. injection valve, Fig. 1 (21)) positioned upstream from the point of introduction of the sample into the reaction loop.

6. Claims 10 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Lear et al. (US 5,252,486) in view of Pollema et al. (US 5,849,592) and further in view of Pawliszyn (US 4,940,333).

Regarding Claims 10 & 11, modified O'Lear et al. disclose all the claim limitations as set forth above. However, O'Lear et al. fail to disclose a method for analyzing a liquid sample comprising a movable point detector.

Pawliszyn discloses a method for analyzing a liquid, wherein:

- a concentration gradient is detected in the reaction loop (Abstract);
- the reaction loop is a transparent capillary or a microfluidic channel (e.g. capillary, Fig. 9 (51), C9/L41);
- the discharge (e.g. discharge tube, Fig. 10 (77)) of the reagents located in the reaction loop is performed by means of the next sample (C10/L23-26);
- a point detection (e.g. optical fiber, Fig. 10 (79 & 83), C10/L26 & 30) is achieved in a location of the reaction loop so that it is possible to obtain a time plot of the reactions in a location of the set: reaction loop and detection means; and
- a point sensor is used, and wherein the point sensor is configured to be movable along the reaction loop (C5/L54).

Regarding Claim 11, it is noted that gluing can be unglued to relocate the detector to another position. In addition, it is noted that said method claim does not recite movement step of the sensor.

O'Lear et al. and Pawliszyn are analogous because these references are directed to liquid analysis (Abstracts).

It would have been obvious to one of ordinary skill in the art at the time of the respective invention to combine movable point detection means, as taught by Pawliszyn, to the respective liquid analyzers, as taught by O'Lear et al. to provide a relocating detector function of optical fibers to study concentration gradient at different positions within the sampling location.

7. Claims 1, 2, 9, 12 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollema et al. (US 5,849,592).

Regarding Claim 1, Pollema et al. disclose a method for analyzing a liquid sample (Abstract) by injecting the latter in a reaction loop coupled with illumination means and detection means, said method comprising the following steps:

- filling a reaction loop with a minimum volume of the sample to be analyzed (C4/L44-47), through a first input and its output, this reaction loop (e.g. reaction coil, Fig. 4A (RC), C4/L49) sample forming a transparent pipe with which detection means (e.g. flow-through detector, Figs. 1-4 (D), C2/L53) are coupled;
- injecting at least one fixed volume of at least one reagent (e.g. reagent, (R), C4/L52) into the reaction loop via a second input using a push-syringe (Figs. 3A-3C (SP), C2/L52) actuated at a flow rate of about 10 to about 1,000  $\mu\text{L min}^{-1}$  (see "aspirate low  $\mu\text{L}$ " C5/L45; "limited to 2 mL/min" C5/L66-67),

- illuminating the transparent pipe (see a colorimeter being used, Claim 5),
- detecting levels of filtered light by the detection means (e.g. flow-through detector, Figs. 1-4 (D), C2/L53 & colorimeter, potentiometer, Claims 5 & 6, respectively));  
and
- recording levels of light transmitted through said transparent pipe after filtering (C6/L62),
- discharging the reagents located in the reaction loop (e.g. waste, C12/L30).

Regarding a pipe with a length between about 0.5 cm and about 10 cm, since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the length of the pipe to control liquid volume in the system, see C1/L43-58 & C2/L44-45.

Regarding limitations recited in Claim 1 which are directed to specific functions of a detector recited in said claim, it is noted that a detector can not function without having an illumination means. Even though Pollema et al. do not explicitly disclose an illumination means, it would have been obvious to employ an illumination means to make the detector fully functional. In addition, it is well known that a flow-through detector has a transparent pipe as a part of its mechanism. Further, in order for a colorimeter to function, it is always used with a filtered light. See evidential reference submitted by applicant's IDS filed on 03/14/2006, Hach (GB 967,586) discloses a liquid analyzing system utilizing a colourimeter (Fig. 1 (15)) with a colour filter (Fig. 1 (63)) as detection means and a lamp (Fig. 1 (60)) as an illumination means to be used with a colourimeter as detection means (Fig. 1 (15)).

Further, Pollema et al. disclose a various required connecting tubing used (C1/L51-52), however, it is silent to the specific shaped branch used thereof. It is well known in the art that the connections can have a variety of shapes of configurations, including T-shaped, C-shaped (semi-circular), square, circular, rectangular, polygonal, etc. The change in configuration of shape of a device is obvious absent persuasive evidence that the particular configuration is significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a T-shaped branch to connect the sample inlet to the push-syringe in order to increase the efficiency of the flow as well as simplify the arrangement.

Regarding Claims 2 & 9, Pollema et al. further disclose the method, wherein:

- a concentration gradient is detected in the reaction loop (C1/L25-27); and
- linear detection (e.g. colorimeter, potentiometer, Claims 5 & 6, respectively) is performed along the reaction loop so that it is possible to obtain a space and time plot of the reactions in the set, reaction loop and detection means.

Regarding Claim 9, with obtained information from the system, it is possible that the recited claim limitations can be achieved.

Regarding Claim 12, Pollema et al. disclose a flow-injection analysis system (Abstract) for analyzing a liquid sample comprising:

- a reaction loop (e.g. reaction coil, Fig. 4A (RC), C4/L49) between the sample introduced through an inlet (see valve (MPV) inlet in Fig. 4A) and at least one reagent (e.g. reagent, (R), C4/L52), and
- detection means (e.g. flow-through detector, Figs. 1-4 (D), C2/L53 & colorimeter, potentiometer, Claims 5 & 6, respectively)), wherein the reaction loop consists of a transparent pipe, and
- said system comprises a push-syringe (e.g. syringe pump, Figs. 3A & 4A (SP)),
- the outlet (see valve (MPV) in Fig. 4A connecting to the (RC)) of which is connected to the transparent pipe allowing doses of said at least one reagent to be delivered into this loop, and
- illumination means with which this transparent pipe may be illuminated (see a colorimeter being used, Claim 5).

Regarding a pipe with a length between about 0.5 cm and about 10 cm, since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the length of the pipe to control liquid volume in the system, see C1/L43-58 & C2/L44-45.

Regarding limitations recited in Claim 12 which are directed to specific functions of a detector recited in said claim, it is noted that a detector can not function without having an illumination means. Even though Pollema et al. do not explicitly disclose an illumination means, it would have been obvious to employ an illumination means to make the detector fully functional. In addition, it is well known that a flow-through detector has a transparent pipe as a

part of its mechanism. Further, in order for a colorimeter to function, it is always used with a filtered light. See evidential reference submitted by applicant's IDS filed on 03/14/2006, Hach (GB 967,586) discloses a liquid analyzing system utilizing a colourimeter (Fig. 1 (15)) with a colour filter (Fig. 1 (63)) as detection means and a lamp (Fig. 1 (60)) as an illumination means to be used with a colourimeter as detection means (Fig. 1 (15)).

In addition, Pollema et al. disclose a various required connecting tubing used (C1/L51-52), however, it is silent to the specific shaped branch used thereof. It is well known in the art that the connections can have a variety of shapes of configurations, including T-shaped, C-shaped (semi-circular), square, circular, rectangular, polygonal, etc. The change in configuration of shape of a device is obvious absent persuasive evidence that the particular configuration is significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a T-shaped branch to connect the sample inlet to the push-syringe in order to increase the efficiency of the flow as well as simplify the arrangement.

Regarding Claim 16, Pollema et al. further disclose the system comprising a peristaltic pump allowing introduction of the sample (C1/L49-50, Figs. 1A-2B (PP)).

8. Claims 13, 15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollema et al. (US 5,849,592) as applied to claim 12 above, and further in view of Pawliszyn (US 4,940,333).

Regarding Claim 13, Pollema et al. disclose all the claim limitations as set forth above. However, Pollema et al. fail to disclose the system comprising a capillary channel.

Pawliszyn discloses a system for analyzing liquid sample (Abstract) comprising:

- a reaction loop (e.g. sample chamber, Figs. 9 (54) & 10 (78), C9/L43 & C10/L25, respectively) between this sample introduced through an inlet (Fig. 9 (60), C9/L48) and at least one reagent (e.g. solvent, Fig. 9 (59)); and
- detection means (e.g. optical fiber, Fig. 10 (79 & 83), C10/L26 & 30);
- characterized in that the reaction loop consists of a transparent pipe (C5/L49); and
- the outlet (e.g. tubing, Fig. 9 (56)) of which is connected to the reaction loop allowing doses of said at least one reagent to be delivered into this loop; and
- illumination means (e.g. LED, Fig. 10 (82), C10/L29) with which this reaction loop may be illuminated so that the detection means record levels of light transmitted through said loop after filtering; and
- the transparent pipe is a transparent capillary or a microfluidic channel (e.g. capillary, Fig. 9 (51), C9/L41).

Pollema et al. and Pawliszyn are analogous because these references are directed to liquid analysis (Abstracts).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a capillary tube, as taught by Pawliszyn, to the liquid analyzers, as taught by Pollema et

al., to further take the advantages of using low sample and reagent necessary to carry out the analysis.

Regarding Claim 15, Pawliszyn further discloses the system comprising the detection means comprise two optical fibers (Fig. 10 (79 & 83), C10/L26 & 30) positioned on either side of the reaction loop.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine optical fibers as detection means, as taught by Pawliszyn, to the flow injection analyzer, as taught by Pollema et al., to add different detection properties of optical fibers since each detector has its own detection range.

Regarding Claim 17, Pawliszyn further discloses the system comprising a microvalve (e.g. valve, Fig. 9 (57)) positioned upstream from the point of introduction of the sample into the reaction loop.

Regarding Claim 17, even though the primary reference is silent to the specific valve used, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a microvalve, as taught by Pawliszyn, since the system is directed to analyze liquid in small volumes which requires precise sample and reagent dispersions.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollema et al. (US 5,849,592) as applied to claim 12 above, and further in view of Petro et al. (US 6,584,832).

Regarding Claims 14, Pollema et al. disclose all the claim limitations as set forth above. However, Pollema et al. fail to disclose a detection means comprise a diode array.

Petro et al. disclose a flow-injection analysis system wherein:

- a reaction loop (see around detection cavity, Fig. 2B (131)) between sample introduced through an inlet (e.g. injection port, Fig. 2B (108)) and at least one reagent (e.g. additional injection port, Fig. 2B (108'))); and
- in that said system comprises a push-syringe (e.g. syringe pump, C30/L4);
- the outlet (see Fig. 2B tubing post filter (104)) of which is connected to the reaction loop allowing doses of said at least one reagent to be delivered into this loop;
- the detection means comprise a diode array (e.g. photodiode array detector, Fig 2B (130), C21/L27); and
- a peristaltic pump allowing introduction of the sample (C30/L11).

Pollema et al. and Petro et al. are analogous because these references are directed to flow injection analysis (Abstracts).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine diode array as detection means, as taught by Petro et al., to the flow injection analyzer, as taught by Pollema et al., to add different detection properties of a diode array since each detector has its own detection range.

***Response to Arguments***

10. Applicant's arguments filed 09/02/2009 have been fully considered but they are not persuasive.

11. In response to applicant's argument that the references fail to show certain features of applicant's invention that:

- O'Lear et al. do not disclose "*reaction loop forming a transparent pipe with a length between about 0.5 cm and about 10 cm*", it is noted that O'Lear et al. disclose a flow-through cell (C12/L68) with length of 0.5 to 2 cm (C11/L47). It is noted that a flow-through cell detector has a transparent pipe as a part of its mechanism;
- With respect to regulator of O'Lear, it is noted that the regulator is fully capable of carrying out a flow rate of 0.13 and 0.18 ml/min (C5/L33) which is within the claimed limitations;
- With respect to "*Pollema does not disclose the claimed features of the reaction loop such as its length*", it is noted that since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the length of the pipe to control liquid volume in the system, see C1/L43-58 & C2/L44-45; and
- With respect to "*Pollema does not disclose the use of a push-syringe*", a use of syringe pump is disclosed in Figs. 3A-3C (SP), C2/L52.

12. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "*push-syringe*" ... "*delivers a variable but rejectable amount of dye...*") are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean Kwak whose telephone number is 571-270-7072. The examiner can normally be reached on M-TH, 5:30 am - 4:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Warden/  
Supervisory Patent Examiner, Art Unit 1797

24Sep09

/D. K./  
Examiner, Art Unit 1797